

- a radio frequency measurement report as measured by one of the UAV or UAC; or
radio resource control (RRC) status of the UAC.
- 8.** The non-transitory memory medium of claim 7, wherein UAV navigational properties includes one or more of:
UAV speed;
UAV orientation; or
UAV altitude; and
wherein GPS information includes one or more of:
a current position or location of the UAV; or
a destination location or destination coordinates of the UAV.
- 9.** The non-transitory memory medium of claim 6, wherein event tracking information includes:
a C2 communication mode change request; and
a cause code associated with the C2 communication mode change request; and
wherein the cause code includes at least one of:
a UAC control release cause code;
a UAC control suspend cause code;
a UAC control resume cause code; or
a UAC lost cause code.
- 10.** An apparatus, comprising:
a memory; and
a processing element in communication with the memory, wherein the processing element is configured to:
receive, from a network entity, tracking information associated with an unmanned aerial vehicle (UAV) and/or a UAV controller (UAC) associated with the UAV, wherein the UAV is in a first control mode supported by communications between the UAV and the UAC via a radio access network, and wherein the tracking information includes at least one of a UAV identifier (UAV ID) associated with the UAV or a UAC identifier (UAC ID) associated with the UAC;
determine, based on the tracking information associated with the UAV, to switch the UAV from the first control mode to a second control mode, wherein the second control mode is supported by communications between the UAV and the apparatus; and
send, to the network entity, a control mode change request, wherein the control mode change request includes at least one of the UAV ID or UAC ID.
- 11.** The apparatus of claim 10,
wherein the control mode change request includes an indication of a cause or reason for the control mode change request, wherein a first cause code is associated with a power level of the UAC dropping below a threshold, wherein a second cause code is associated with the UAC detecting or determining entry of the UAV into a designated area, wherein a third cause code is associated with the UAC detecting or determining exiting of the UAV from a designated area, and wherein a fourth cause code is associated with the UAV not receiving any C2 commands from the UAC within a specified period of time.
- 12.** The apparatus of claim 10,
wherein the tracking information is at least one of periodic tracking information or event tracking information.

- 13.** The apparatus of claim 12,
wherein periodic tracking information includes at least one of:
UAV navigational properties;
a cell identifier associated with the UAV;
a tracking area code (TAC) identifier associated with the UAV;
global positioning system (GPS) information associated with the UAV;
a C2 link communication quality as reported by one of the UAV or UAC;
a radio frequency measurement report as measured by one of the UAV or UAC; or
radio resource control (RRC) status of the UAC; and
wherein event tracking information includes:
a C2 communication mode change request; and
a cause code associated with the C2 communication mode change request.
- 14.** The apparatus of claim 13,
wherein UAV navigational properties includes one or more of:
UAV speed;
UAV orientation; or
UAV altitude; and
wherein GPS information includes one or more of:
a current position or location of the UAV; or
a destination location or destination coordinates of the UAV.
- 15.** A unmanned aerial vehicle (UAV), comprising:
one or more antennas;
one or more radios, wherein each of the one or more radios is configured to perform cellular communication using at least one radio access technology (RAT);
one or more processors coupled to the one or more radios, wherein the one or more processors and the one or more radios are configured to perform voice and/or data communications;
wherein the one or more processors are configured to cause the UAV to:
send, to a network entity, tracking information associated with the UAV and/or a UAV controller (UAC) associated with the UAV, wherein the UAV is in a Network-Assisted control mode, and wherein the tracking information includes at least one of a UAV identifier (UAV ID) associated with the UAV or a UAC identifier (UAC ID) associated with the UAC;
receive, from the network entity, a control mode change request indicating a switch of the UAV from the Network-Assisted control mode to a UTM-Navigated control mode, wherein the control mode change request includes at least one of the UAV ID or UAC ID; and
send, to the network entity, a control mode change confirmation, wherein the control mode change request includes at least one of the UAV ID or UAC ID.
- 16.** The UAV of claim 15,
wherein the tracking information includes event-based tracking information, and wherein the event-based tracking information includes:
a C2 communication mode change request; and
a cause code associated with the C2 communication mode change request; and